Dyno Nobel Incorporated

EPA ID Number NYD000799122

Other (Former) Names of Site

Brewster Explosives; Hercules; and IRECO

Site Description

Dyno Nobel is located on Ulster Avenue in Ulster Park, approximately one mile south of the village of Port Ewen in Ulster County, New York, in a small valley bordered by Hussey Hill on the west and a low lying ridge (adjacent to the Hudson River) to the east. To the east, northeast, and southeast of the site are wetlands that drain to several unnamed tributaries of the Plantasie Creek. These tributaries flow northward into Rondout Creek, which then flows into the Hudson north of Port Ewen.

The site comprises approximately 350 acres, of which 100 are developed. The site is in active use, manufacturing explosives, primers and igniters. Explosives have been manufactured at this site since 1912.

Dyno Nobel is contaminated with metals and organic chemicals from the disposal of waste products in several solid waste management units (SWMUs), including a detonation pond, four land disposal units, and a wetland area. Air emissions from building vents, piles of construction debris, and hazardous waste disposal operations of chemicals that subsequently settled on the soil, resulted in the formation of over 50 small SWMUs, approximately 25 of which require corrective action.

Site Responsibility and Legal Instrument

A New York State Consent Order executed on April 15, 1996 addresses the implementation of Resource Conservation and Recovery Act (RCRA) Corrective Action investigations. The 6NYCRR Part 373 Hazardous Waste Management Permit for the facility addresses:

- the storage and management of hazardous waste in containers;
- the destruction of hazardous waste in a RCRA Subpart X detonation unit; and
- RCRA Corrective Actions, which include Corrective Measures Studies, Interim Corrective Measures, and groundwater monitoring and reporting.

Permit Status

A 6NYCRR Part 373 Hazardous Waste Management Permit was issued on September 22, 2000.

Potential Threats and Contaminants

The Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI), which was completed in 1999, identified the following contamination:

Groundwater
Groundwater at Dyno Nobel was found to be contaminated primarily with volatile organic compounds (VOCs) and selenium, with the most heavily contaminated area of VOCs localized near the shell manufacturing building (where detonator casings are manufactured). Groundwater is not used as a source of drinking water and there are no known public or private drinking water supply wells impacted by this groundwater. However, the State considers all its groundwater to be a potential source of potable water, so requires it be remediated to its groundwater quality protection standards.

There is no indication that contaminated groundwater has moved off-site. It is believed that groundwater contamination is localized and will not require active treatment. In lieu of active treatment, monitored natural attenuation, with some source control, is being considered as the option for remedying groundwater contamination.

Soils
The RCRA Facility Investigation showed that the soils are contaminated with volatile organic compounds, explosives, and numerous metals including mercury, selenium, copper and lead. Due to the possibility of serious explosions or accidents occurring at this facility, caution and care during investigation and cleanup are critical. Although some past cleanup activities have reduced the threat of explosions, the potential threat of such explosions from chemicals imbedded in the soil still exists for workers.

Indoor Air
A soil gas investigation conducted in the year 2002 in the vicinity of the shell plant, indicated a lack of the potential for soil gas vapor intrusion (indoor air contamination from contaminated groundwater) at the shell plant.

Trespassers are kept off-site by a combination of fencing and security. Workers sampling and managing contaminated groundwater or soils, or doing construction will do so following an appropriate health and safety plan.

Cleanup Approach and Progress

The explosive nature of some of the contaminants at Dyno Nobel requires utilization of specialized equipment and experience to reduce the potential risks. The 6NYCRR Part 373 permit requires the submission of a RCRA Corrective Measures Study (CMS) to evaluate potential remedies for the contaminated groundwater, the waste and soil in the detonation pond and the waste material in the two land disposal units. The permit also requires a focused CMS and Interim Corrective Measure removal action design plan for the approximately 25 solid waste management units (SWMUs) and 4 areas of concern

located within the manufacturing area, as well as for any SWMUs which may be identified in the future.

The Corrective Measures Study (CMS) has been submitted to New York State Department of Conservation (NYSDEC) and is under review. At NYSDEC's request, Dyno Nobel has prepared an addendum to the CMS, which provides a detailed accounting of all recorded mishaps at the facility which could have resulted in the formation of previously undetected solid waste management units and other areas of concern. This addendum was submitted to NYSDEC in late September 2003, and is under review. It identified the existence of two new solid waste management units and six new areas of concern. Sampling is being planned at several of these areas to further assess whether these newly discovered units/areas contain hazardous constituents.

Interim measures conducted thus far include the removal of explosive materials from a sump of Building 2075, and construction of a large chain-link fence to the east of the plant site to keep trespassers from entering the property.

Environmental Indicator Status or Projection

CA 725 - Current Human Exposure Under Control [1] was achieved as of September 2002.

CA 750 - Migration of Contaminated Groundwater Under Control [1]
It is believed that groundwater contamination is localized and will not require active treatment. NYSDEC is evaluating the new data received via the September 2003 Addendum to the CMS, to determine whether it would affect this assumption. A final determination is expected by the year 2005.

[1] Applies to RCRA regulated units only.

Site Repository

Copies of supporting technical documents and correspondence cited in this site fact sheet are available for public review at:

NYSDEC
Division of Solid and Hazardous Materials
Bureau of Solid Waste and Corrective Action
625 Broadway
Albany, NY 12233-7255